

# A NOTE FROM THE DIRECTOR

INCE LOMBARDI SAID: "individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work." Conserving Wisconsin's animals, plants and ecosystems requires the commitment of many individuals. This theme runs throughout this small sampling of our collective efforts in 2017.

You must have an interest, an enthusiasm, or maybe even a passion for Wisconsin's natural heritage as a reader of our annual report. Some of you even volunteered to listen for frog calls, document rare plants or enter bird sightings. Some planted native plants like milkweeds to benefit monarchs and other species. Some of you warmed by a fire after some hard work to control brush at a State Natural Area. Perhaps you threw on a pair of waders and helped stock mussels back into a stream.

Many of you proudly displayed eagle, badger or wolf license plates on your vehicles. These plates made your car or truck look its best while continuing to make our work possible. Many of you sent in checks, donated online or included gifts to the Endangered Resources Fund on

your state income tax forms. These donations were critical for the projects described in this report, as well as scores of others.

Maybe you introduced friends or family members to Wisconsin's native plants and animals or took them out to visit our State Natural Areas, the oldest such system of preserves in the country. Perhaps one of those people was a child who will take over for us someday.

Whatever the case, thank you! We hope you enjoy reading this report, and we look forward to continuing our work together in 2018.

**DREW FELDKIRCHNER** 

# **SLOW BUT** STEADY WINS THE **RACE PROTECTING WOOD TURTLE NESTS IS IMPORTANT TO CONSERVING THIS** state-threatened species. Predators like raccoons dig up many nests before the eggs hatch, so NHC biologists protected nests with enclosures, allowing nearly 40 nests to hatch in the last three years. NHC biologists also restored nesting sites and installed electric fencing on four large sites and plan more next year. Photos: (A) Wood turtles mature late and their eggs are vulnerable to predators. (B) Disturbed nests were relocated and restored. (C) Large sites were fenced while individual nests had cages placed over them.

# YOUR DONATION MAKES A DIFFERENCE

FY 2017 REVENUE 12.3% PROGRAM REVENUE \$725,328 **DONATION MATCH\*** \$500,000 GRANTS **LICENSE PLATE SALES** \$2,389,053 \$410,239 15.8% **DONATIONS** TAX RETURN \$930,636 **DONATIONS** STATE FUNDS \$280,474 \$1,341,047 **DONOR FUNDS** \$239,923 \*Donations to the **Endangered Resource** Fund are matched dollar for dollar by the state up to 22.8% \$500,000.

(D) Turtle team members

hatches. All photos by Carly

celebrate successful

Lapin, Wisconsin DNR, except (A) by Ryan Brady.





### ANOTHER BALD EAGLE RECOVERY MILESTONE

A Kenosha County landowner had history-making visitors this year — the first documented pair of breeding bald eagles in that county in more than a century. NHC staff confirmed the nest. The discovery highlights bald eagles' successful recovery in Wisconsin and leaves only Milwaukee and Walworth counties without documented active nests. To report an active nest, go to dnr.wi.gov, search "NHC" and click on "Report."



### WNS SPREADS, BUT BAT RESEARCH ADVANCES

Winter 2017 surveys showed white-nose syndrome in 24 of 28 counties with known bat hibernacula and population decreases of 30 to 100 percent in some sites. But intensive data collection by NHC, partners and volunteers before WNS hit here positions Wisconsin well to guide the recovery. Other silver linings include a record 2,200 attendees at the Wisconsin Bat Festival and ongoing NHC research advancing understanding of Wisconsin's smallest bat, the eastern pipistrelle, and its newest species, the evening bat.



### SNAKES ALIVE!

Past bounties, habitat destruction, and a recent fungal disease put eastern massasauga rattlesnakes on the federal threatened species list in 2016. NHC has been surveying sites to better document its statewide range and abundance. At one site, 10 snakes were found in just a single visit. Other surveys reconfirmed populations last seen 20 to 50 years ago and raised hopes that some populations are persisting.



### MONKSHOOD UNCOVERED

Showing, yet again, the importance of citizen efforts, a volunteer for DNR's Rare Plant Monitoring Program found a new population of northern monkshood, a federally threatened plant with a very distinctive, blue, hood-shaped flower. Monkshood is documented at only 15 different sites in Wisconsin and sites in Iowa, Ohio and New York. Adding this recent discovery to the Natural Heritage Inventory (NHI) database of rare species helps better protect the population.

Photos (from top to bottom): Active bald eagle nests are found in 70 of 72 Wisconsin counties, photo courtesy of the U.S. Fish & Wildlife Service. A bat wing with holes and scarring from white-nose syndrome, photo by Heather Kaarakka, Wisconsin DNR. An eastern massasauga rattlesnake, photo by Rori Paloski, Wisconsin DNR. Northern monkshood, photo by Aaron Carlson.

3 Natural Heritage Conservation Program 2017 Annual Report 2





### MUSIC TO FROG-LOVERS' EARS

After a 50-year silence, the sound of "crickets" is back in Trempealeau County. A volunteer for NHC's Wisconsin Frog and Toad Survey heard the unique clicking call of the Blanchard's cricket frog, a state endangered species DNR last documented in 1965 in that county. NHC staff confirmed the report in 2017 and detected frogs in nearby Buffalo and La Crosse counties, where they were last heard 30 years ago. It's too early to tell if these frogs are making a comeback, but their calls are music to biologists' ears.



### NATURAL AREAS WORK YIELDS NEW SPECIES

More very rare plant and wildlife species and some not even known to science are being found as NHC staff continue to restore and manage more State Natural Area habitat. An NHC biologist spotted a gall, an abnormal growth, on a lead plant at an SNA in Waushara County in 2017. He raised the moth and insect experts confirmed it as *Walshia amorphella*, a new species for Wisconsin and one of 1,300 documented here. Biologists think that's only half the moth species out there, so keep your eyes peeled as you explore these special places.



### INROADS MADE IN INVASIVE SPECIES CONTROL

Efforts to prevent the spread of invasive plants grew in 2017 as NHC staff worked with 10 existing and two new Cooperative Invasive Species Management Areas. These coalitions of regional organizations, agencies and individuals can help get outreach and control work done. NHC and DNR's Forestry Division provided small grants to help partners and contractors control small populations of prohibited and early detection plants, such as wild chervil spreading along roadsides in Chippewa and Dunn counties.



### FLIGHT OF THE ENDANGERED BUMBLE BEE

The rusty patched bumble bee is the first bee in the lower 48 states to be listed as federally endangered, and Wisconsin is a stronghold of remaining populations. NHC staff have been involved in federal efforts to develop a recovery strategy and, along with citizen scientists, search for the bee. It was found in six new Wisconsin counties this year, bringing the total to 21. Submit photographs online to Bumble Bee Watch to advance research and conservation of this important pollinator.

Photos (from top to bottom): Blanchard's cricket frog, photo by Rori Paloski, Wisconsin DNR. This gall, an abnormal growth on the plant, harbors the caterpillar of the state's newest moth species, photo by Armund Bartz, Wisconsin DNR. Highway crews learn about invasive species along road right-of-ways, photo courtesy of Lower Chippewa Invasives Partnership. Rusty patched bumble bee, photo by Jay Watson, Wisconsin DNR.

Natural Heritage Co<mark>nservation Program</mark> 2017 Annual Report **6** 

# CITIZEN SCIENTISTS BUILD UP MUSSELS NHC STAFF AND THE UPPER SUGAR RIVER WATERSHED

stocked 400 plain pocketbook mussels, a native species, into the Sugar River to restore its depleted population. Such native mussels help filter water and provide food. Each mussel was marked and measured and volunteers will return each year to monitor their survival. The project was funded by DNR's Citizen-based Monitoring Partnership Program and was one of 21 projects selected in 2017 to support volunteer efforts to monitor Wisconsin's rare plants, animals and habitats.

**ASSOCIATION** 

Photos: (A) Plain pocketbook mussels propagated at Genoa National Fish Hatchery. (B) Eva Lewandowski. NHC citizen-based monitoring coordinator, with mussels. (C) NHC staff and volunteers "plant" mussels in Dane County's Sugar River. (D) NHC mussel expert Jesse Weinzinger, center, helped guide where and which species were stocked. All photos courtesy of Eva Lewandowski. Wisconsin DNR.



### KARNER BLUES GET HABITAT HELP

Wisconsin has more Karner blue butterflies than anywhere else in the world, and NHC continues restoring habitat for this endangered species. For example, a 34-acre area of Coon Fork Barrens State Natural Area is now exploding with lupine and other plants critical for Karners following a recent prescribed burn; butterfly numbers increased at this site too. With restoration projects planned through this fall/winter, Karners will gain more than 900 acres of improved habitat, which will also benefit a host of other species, by the end of 2017.



### NATURAL AREA ADDITION BENEFITS RARE SPECIES

Bell's Vireo, red-shouldered hawks and other rare birds, mussels and fish will benefit from a 2017 acquisition of 3 miles of shoreline and 1,000 acres of land expanding the Lower Chippewa River State Natural Area. Purchased using Knowles-Nelson Stewardship funds, the Dunn County property also connects another natural area and a state wildlife area. The contiguous block of land allows for more effective management and protects habitat for rare species. Partners are working to acquire the rest of the land from the seller. Stay tuned!



### **RESTORATION BRINGS BACK WOODPECKERS**

More than 150 years after famed naturalist John Muir wrote of boyhood summers "watching my favorite red-headed woodpeckers pursuing moths like regular flycatchers..." these noisy neighbors are making a comeback in his old Marquette County haunts and elsewhere in Wisconsin. Prescribed burns, timber harvests and brush control by NHC crews and other public and private land managers are restoring savanna and barrens while leaving old dead trees standing. Other rare or declining species also benefit from the habitat work.



### **GRASSLAND "ENGINEERS" SURFACE**

Small mammals are critical to grassland ecosystems — they disperse seeds, create burrows and are food for other animals. But loss of these habitats and competition from more common species have decimated populations of prairie voles, prairie deer mice and western harvest mice. NHC's initiative to look for these rare species came up largely empty in 2016. This year, however, biologists using live traps documented all three species, identifying more sites to protect and manage.

Photos (from top to bottom): A site is transformed as lupine explodes at Coon Fork Barrens after prescribed fire and a timber harvest, photo by Brooke Ludwig, Wisconsin DNR. Aerial view of the Lower Chippewa River State Natural Area, photo by Aaron Carlson. Red-headed woodpecker, photo by Tom Prestby. Conservation biologist Rich Staffen measures a prairie deer mouse, photo by Lisa Gaumnitz. Wisconsin DNR.

7 Natural Heritage Conservation Program 2017 Annual Report 8

# THE BEST GETS BETTER

## WISCONSIN HAS THE NATION'S LARGEST AND OLDEST SYSTEM OF NATURE PRESERVES

and more of them got the help they needed in 2017 as NHC field staff controlled brush and invasive plants, conducted prescribed burns and arranged timber harvests on a record 12,445 acres. Such management is particularly important for maintaining Wisconsin's best remaining prairie and oak savanna and barren remnants and providing refuge for the endangered plants and animals that depend on such habitat.

Photos: (A, D) Crews use prescribed fire to maintain prairie and oak savanna at State Natural Areas including Grant County's Blue River Bluffs and Walworth County's Bluff Creek, respectively, photos by Sharon Fandel, Wisconsin DNR. (B) Crew member Mike Stelpflug hunts for invasive crown vetch on Battle Bluff's steep slopes, photo by Peter Duerkop. (C) Girdling invasive trees, DNR file.





### **BOOSTING HABITAT ON PRIVATE LANDS**

Since the first grants were awarded in 2006, NHC's Landowner Incentive Program has helped restore 12,000 acres of privately owned land statewide, mostly in the Driftless Area. Private landowners get access to NHC expertise and grant funds to restore and maintain habitat for more than 240 at-risk species. These efforts are partially funded through federal grants, and NHC received another U.S. Fish & Wildlife grant to continue the effort and will be accepting applications from landowners starting in late 2017.



### FIRST PEREGRINE FALCON NEST IN DOOR COUNTY

Good news for the state-endangered peregrine falcon as numbers and territories continue to grow. Wisconsin Breeding Bird Atlas II volunteers in 2017 documented Door County's first successful nest since the 1950s! Peregrines started recovering as DDT levels in the environment declined and captive-reared birds took to nest boxes installed on utility towers and tall buildings. Now, more birds are nesting in traditional natural settings, such as cliffs.



### TUNNEL LETS TURTLES KEEP TRUCKIN'

Turtles typically cross roads to reach uplands where they lay eggs, so reducing their roadkill is important to conserving their populations. In central Wisconsin, citizens reported a deadly road crossing for turtles, so NHC, state transportation officials and UW-Stevens Point collaborated to install and monitor a wildlife underpass when a highway was resurfaced, significantly increasing turtle survival. The number of road-killed turtles dropped from 66 in 2015 before the tunnel to just 10 this year through October.



### **VOLUNTEERS GIVE NATURAL AREAS A HAND**

The number of volunteer groups helping care for State Natural Areas doubled, benefitting seven times as many acres as the previous year. Thirty-six groups devoted 5,820 hours in 2016 at 43 state natural areas, sites that represent some of Wisconsin's best remaining prairies, oak savannas, wetlands and lakes. Their efforts directly impacted 3,514 acres and represented \$139,736 in value. To join in a volunteer workday near you, go to dnr.wi.gov and search "SNA volunteers."

Photos (from top to bottom): Conservation biologist Darcy Kind advises a Landowner Incentive Program participant on restoring rare species habitat, photo by Nate Fayram, Wisconsin DNR. Young peregrine falcons from the first successful Door County nest since the 1950s, photo by Melody Walsh. Turtle using the tunnel, photo courtesy of Friends of the Plover River Turtles. Volunteers are making a big difference for State Natural Areas, photo courtesy of Kohl's.

Natural Heritage Co<mark>nservation Program</mark> 2017 Annual Report **10** 

# **SURVEY** TAKES STOCK OF **THREE FIELD** SEASONS DOWN AND TWO TO GO FOR THE WISCONSIN **BREEDING BIRD** ATLAS II. the statewide citizen-science project to map all of Wisconsin's breeding birds and compare results

ence project to map all of Wisconsin's breeding birds and compare results to the first atlas (1995–2000). Volunteers have now confirmed 239 species breeding in the state, including 12 not found during the first atlas, like king rails spied at Horicon Marsh. Organizers still need help across most of the state. Learn how to add your sightings at www.wsobirds.org/atlas.

Photos: (A) Keep an eye out for the white-winged crossbill, a finch that breeds in northern conifer bogs. It is the only species confirmed at least five times in the first WI Breeding Bird Atlas survey 20 years ago and not yet confirmed in the second atlas, photo by Steve Brady.



**SAW-WHET, REPORT IT!** Although a common forest owl across Wisconsin at various times of year, the robin-sized northern saw-whet owl is highly nocturnal and thus rarely seen. This curious young bird was photographed by NHC conservation biologist Ryan Brady. Get involved and report your sightings for the Wisconsin Breeding Bird Atlas II.



### **BAT FLIES 35 MILES TO SUMMER HOME**

A Wisconsin bat weighing less than a nickel flew 35 miles in 3.3 hours and led NHC bat biologists tracking her on a historic chase. The biologists caught the eastern pipistrelle as it emerged from a cave, outfitted it with a radio transmitter, and criss-crossed the Mississippi River in their cars to track the bat. It stopped to roost in a birch tree near Hudson. This marks the first time pipistrelles have been radio-tracked during spring migration in North America, and researchers' findings will help guide protection of the bats' summer habitats.



### FINDING AND PROTECTING RARE TREASURES

Wisconsin has certain plants found in few other places in the world, giving us a special responsibility to protect these treasures. In 2017 NHC collaborated with the Wisconsin State Herbarium to survey dunes and beaches along Lake Michigan, exposed dolomite of the Niagara Escarpment, and calcareous swamps for these species, including dwarf lake iris, dune goldenrod and ram's head orchid. Results will inform future management for plants in an area facing growing development pressure.



### RAREST OF THE RARE

NHC staff in 2017 rediscovered four of Wisconsin's rarest plants: the Lapland azalea, a cliff-dwelling shrub more commonly found in the tundra; northern oak fern, spied on a riverside cliff near Lake Superior; the low spike-moss, a fern-like vascular plant in boreal forests in Door County; and the fly honeysuckle, a shrub found in tamarack swamp near Lake Superior. These plants are so rare — three of the four species are found in only a single location. Having current information on location and population size enables DNR to better protect their habitats.



### SIGNS OF GOOD THINGS TO COME FOR BOX TURTLES

Surveys that used specially trained dogs to sniff out endangered ornate box turtles documented a hatchling turtle, the first observed in years and proof of natural reproduction. Work also progressed to restore and expand turtle nesting and overwintering habitat at two project areas in southern Wisconsin. And finally, turtles and other reptiles and amphibians got an endowment fund of their own in 2017—the Wisconsin Amphibian and Reptile Conservation Fund from the Natural Resources Foundation of Wisconsin.

Photos (from top to bottom): An eastern pipistrelle radio-tagged in spring 2017 led NHC biologists on a historic chase, photo by Heather Kaarakka, Wisconsin DNR. Dwarf lake iris, photo by Josh Mayer. Lapland azalea, photo by Thomas Meyer, Wisconsin DNR. Ornate box turtle, photo by Rori Paloski, Wisconsin DNR.

11 Natural Heritage Co<mark>nservation Program</mark> 2017 Annual Report 12

## MEET SOME OF OUR VOLUNTEERS

### JIM EDLHUBER

Every night from spring in to fall, Jim Edlhuber of Waukesha counts bats emerging from the bat house on his garage. As a volunteer for NHC's Bat Monitoring program, the seven years he's followed this nightly routine have generated a valuable baseline record of bat populations and how bats may be affected by white-nose syndrome, a deadly bat disease spreading across Wisconsin.

He encourages other people to count bats to advance bat research and to install a roost on their property, noting his only maintenance work is washing the driveway with a garden hose once every week or two.

"It is a great opportunity to see bats daily and to realize bats are harmless too," Jim says. "I have always been naturally curious about bats and wildlife in general. I feel I am doing my part to help in the bat research. I love bats and wildlife so I find this all exciting! One time, counting over 75-plus bats come out, it was just incredible to witness."



# Melody and birding partner Randy Holm hold young peregrine falcons, photo by Greg Septon

### **MELODY WALSH**

Retired from a 32-year-career with the Department of Natural Resources, Melody Walsh now continues her commitment to nature through prodigious volunteering around her Door County home and displaying a specialty license plate providing a \$25 annual donation to the Endangered Resources Fund.

Melody has done everything from clean up and docent work at Rock Island State Park, to mapping invasive phragmites, to caring for natural areas, monitoring bats and banding bald eagles. Volunteering for the Wisconsin Breeding Bird Atlas provided her favorite memory.

In 2017, three years after she first spied a young peregrine falcon on Washington Island and spent subsequent years searching for signs the endangered birds were nesting there, Walsh helped find and band two peregrine chicks from Door County's first successful peregrine nest since the 1950s. "Being part of the banding team and coordinating logistics was a moment I will never forget," she says.

Volunteering "allows me to enjoy and explore my natural surroundings and I feel in my own small way it can make a difference. The data I submit allows me to become a citizen scientist.

"I absolutely LOVE my Endangered Resources license plate. I had it personalized to identify my passion. It also serves double duty to promote the eBird website essential in the Wisconsin Breeding Bird Atlas reporting."

# MEET SOME OF OUR STAFF



CARLY LAPIN NORTH CENTRAL WI FIELD ECOLOGIST

After growing up in southern Wisconsin and getting a master's in biology from the University of Minnesota-Duluth, I began my NHC career in 2013 on an American marten research project based in Rhinelander. Now I am the regional ecologist monitoring and working on State Natural Areas in eight north-central Wisconsin counties. I am also fortunate to be involved with plenty of rare species work, including studying and implementing conservation measures for the state-threatened wood turtle. I love the woods, waters and wetlands of northern Wisconsin and am very fortunate to live and work here!



JARED URBAN SNA VOLUNTEER PROGRAM COORDINATOR

After getting a biology/environmental science degree from Illinois College and a master's in plant biology from Southern Illinois University, I started working on the Fitchburg State Natural Areas crew in 2008 removing invasives. I now spend all my time on the State Natural Area volunteer program, where I interact with some of the most passionate people in Wisconsin. I enjoy seeing the look on people's faces when they discover something cool in nature. I also enjoy the feeling of accomplishment after some hard work clearing brush. During free time I enjoy backpacking trips, ice fishing and working in my garden.



MATT ZINE FIELD OPERATIONS TEAM LEADER

I'm somewhere in the middle-generation in NHC, having served as State Natural Areas field biologist in southern Wisconsin for 13 years, coordinator of statewide management for four, and now supervisor of southern district ecologists and their crews. I've been part of the SNA program this long because I feel like what we do is important and has real repercussions for native plant communities and the long-term preservation of the species within. The more we get done, the greater the impact. On life outside DNR, I live with my partner, Julie, in Madison where we like to hang out with our four grown kids and friends, and head out West to goof off as often as we can.



DARCY KIND PRIVATE LANDS BIOLOGIST

I am a graduate of Lawrence University in Appleton and began working with DNR in 1998 assisting with hunter satisfaction and wild pheasant surveys, followed by work on deer and upland game. I started working with NHC in 2000 helping private landowners conserve and manage federally listed plant species. Now I work with the Landowner Incentive Program helping landowners identify the good and bad things about their property and prioritizing their ecological restoration process. I spend my time outside work gardening, enjoying time in Canada in a canoe, taking in art and culture in Madison and spending time with my husband and dog.

# THANK YOU

Donors like you make a difference every year for Wisconsin's endangered wildlife and State Natural Areas. **Give now and double your impact — every gift is matched dollar for dollar.** 

# **1** Donate online or by check

Donate online by going to dnr.wi.gov, searching "NHC" and clicking on the donate button, or write a check payable to the "Endangered Resources Fund" and send to:

Wisconsin DNR Natural Heritage Conservation P.O. Box 7921 Madison, WI 53707

# 2 License plate

Celebrate the remarkable recovery of bald eagles in Wisconsin and help lay the foundation for the next conservation success by buying an endangered resources license plate. To learn more, go to dnr.wi.gov and search"eagle plate."





Cover photo by Ryan Brady Designed by Tyler Brandt Printed at Schumann Printers, Fall River. Wisconsin The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of the Interior, Washington, DC 20240.

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Publication number: PUB-NH 0900-2017